

CLAY LOWLAND  
KANSAS RANGE SITE DESCRIPTION

1. Location of Site:

Land Resource Area 72  
Central High Table Land



2. Climate:

See climate for LRA 72  
(Filed in the front of Section II-E)

3. Topography:

Nearly level to gently sloping alluvial lands that receive additional water from flooding.

4. Soils and Hydrological Characteristics:

- a. The deep soils on this site have loamy or clayey surface layers and clayey subsoils. Water tables may temporarily rise into the root zone during wet periods but is not the dominant factor controlling vegetative growth. Available water capacity is moderate to high.
- b. The major soil and soil types that characterize this site are clayey alluvial land and Church clay, dark variant.
- c. Soils on this site are susceptible to wind and water erosion when unprotected. Internal drainage is slow to very slow with surface ponding a problem. Flooding is also a hazard.

5. Climax Vegetation:

- a. Tall, mid, and short grasses combine to make this a potential mixed grass prairie site. Big bluestem, sideoats grama, switchgrass, western wheatgrass, and vinemesquite make up about 55 percent of the potential vegetation. Buffalograss and blue grama combine with sedges to make up an additional 30 percent of the potential vegetation.

b. Guidelines for Determining Range Condition:

(Percentage of total production by weight)

<u>Grasses and Grasslike - 90 Percent</u>		<u>Forbs - 10 Percent</u>	<u>Shrubs and Cacti - T</u>
55	10 big bluestem	burrageed	T pricklypear
	20 sideoats grama	curled dock	
	20 switchgrass	Dakota verbena	
	10 vinemesquite	fog fruit	
	20 western wheatgrass	10 heath aster	
30		lambquarter	
	15 blue grama	Louisiana sagewort	
	15 buffalograss	nineanther dalea	
	10 sedges	Texas croton	
5		western ragweed	
	Canada wildrye		
	prairie cordgrass		
	sand dropseed		
	tall dropseed		

c. Invaders common to this site are bottlebrush squirreltail, cocklebur, giant ragweed, Japanese brome, kochia, smartweeds, rag sumpweed, and snow-on-the-mountain.

6. Management Implications:

This site occurs on level to nearly level bottomlands. The high clay content of the soils contributes to a high degree of difficulty in managing this site to maintain it in good to excellent condition.

Although the site is often wet in the spring, it usually becomes extremely dry with large soil cracks in the hot, dry part of the summer. Continuous grazing may cause severe compaction in the spring and early summer months further reducing water intake and root development. This combined with heavy grazing throughout the growing season makes it very difficult to maintain the taller grasses.

With overgrazing buffalograss, blue grama, and sand dropseed tend to dominate this site. Continued overgrazing allows the ragweeds, rag sumpweed, little barley, and kochia to dominate the site. Once these plants dominate the site, most of the taller grasses have been eliminated. To return it to its productive potential is very slow even with good grazing management.

Proper stocking rates and flexible grazing systems are necessary to maintain this site or return it to near its potential.

Grazing should be avoided when the site is wet, if practical. It should also allow for grazing and rest periods during the growing season. The grass stubble should be maintained at a sufficient height (4" to 6") to insulate the soil against baking during hot dry summers. Use of this site for some winter grazing may be advisable because of potential livestock insect problems in the summer and the need to maintain a good vegetative cover during the hot, dry season.

Producers should be cautioned that the forage on this site tends to be somewhat coarser than that on upland sites. The forage may be of lower quality than that found on upland sites, especially during the dormant season.

7. Wildlife Considerations:

When maintained in good to excellent condition, this site provides good feeding and loafing areas for most wildlife native to the area. The wetness in the spring and the dry summer periods limit its value as a yearlong habitat. When in fair to poor condition, this site is of limited value to most wildlife.

8. Other Uses and Values:

Most of this site is used exclusively for rangeland. Limited acreages are used as cropland, both dryland and irrigated.

9. Herbage Production Guidelines:

The following guidelines are based on available clipping data when this site is in excellent condition. Vigor of principal forage species, time of burning, if fire is used, as well as growing conditions, influence annual herbage production.

<u>Growing Conditions</u>	<u>Total Air Dry Herbage</u>	
	<u>Pounds/Acre</u>	<u>Kilograms/Hectare</u>
Favorable	3,000-4,000	3,360-4,480
Normal	2,000-3,000	2,240-3,360
Unfavorable	1,200-2,000	1,340-2,240

10. Guide to Initial Stocking Rates:

<u>Range Condition</u>	<u>Percent Climax Vegetation</u>	<u>Acres/AU Yearlong</u>	<u>AU Months Per Acre</u>	<u>Hectares/AU Yearlong</u>	<u>AUM's per Hectare</u>
Excellent	76-100	14-16	.8	5.6-6.5	2.0
Good	51-75	16-20	.7	6.5-8.1	1.75
Fair	26-50	20-30	.5	8-12	1.25
Poor	0-25	30+	.3	12+	0.75

These guidelines are considered safe initial stocking rates from which a sound management program can be built. Grazing only during the dormant season or use of a specialized grazing program will usually allow a substantial increase in the stocking rates shown.

When in good to excellent condition, this site normally produces about 0.75 ton of native hay per acre.

# 11. Relative Preference of Plant Species:

Preferences of plant species by classes of livestock and uses by wildlife will vary from year to year and season to season. The table below is what might be expected under average climatic conditions and good management.

## Forage Preferences

H = High  
M = Medium  
L = Low

## Wildlife Preferred Uses

C = Cover  
F = Food  
N = Nesting

Plant Species	Animal Species		
	Cattle	Deer	Pheasant
big bluestem	H	C	C,N
blue grama	H	--	--
buffalograss	H	--	--
burrageed	L	F	F
Canada wildrye	H	C,F	C,N
curled dock	L	--	F
heath aster	H	F	F
lambsquarter	L	F	F
little bluestem	H	C	C,N
Louisiana sagewort	L	--	F
prairie cordgrass	M <u>1/</u>	C	C,N
sedges	M	F	F
sideoats grama	H	--	C,N
switchgrass	H <u>2/</u>	C	C,F,N
Texas croton	L	--	F
vinemesquite	H <u>2/</u>	C	C,N
western ragweed	M	F	F
western wheatgrass	H	F	C,N

1/ Has a high preference during lush growth periods.

2/ Preferred during first half of growing season

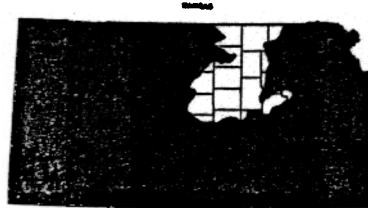
## Reference:

Anderson, Kling L. and Clenton E. Owensby. 1969 Common Names of a Selected List of Plants. Kansas State University Tech. Bul. 117.

CLAY LOWLAND  
KANSAS RANGE SITE DESCRIPTION

1. Location of Site:

Land Resource Areas 74 and 75 (North Half)  
Central Kansas Sandstone Hills and  
Central Loess Plains (North Half)



2. Climate:

See climate for LRA's 74 and 75  
(Filed in the front of Section II-E)

3. Topography:

Nearly level to concave flood plains that are occasionally to frequently flooded.

4. Soils and Hydrological Characteristics:

- a. The soils on this site are deep, clayey soils and have slow or very slow permeability. The high shrink-swell characteristics cause large deep cracks to develop in dry years. These conditions result in a network of small depressions and ridges scattered across the landscape. The site includes soils that are moderately well to poorly drained.
- b. The major soils that characterize this site are:  

New Cambria	Solomon	Sutphen
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- c. The soils on this site are occasionally to frequently flooded and also receive runoff from adjacent slopes. Surface runoff is very slow. Surface soils are frequently saturated with water prior to and during early spring growth periods. Puddling can be a problem under these conditions.

5. Climax Vegetation:

- a. Big bluestem dominates this site when in climax condition. Switchgrass, prairie cordgrass, indiangrass, and eastern gamagrass are also present in smaller quantities. These tall grasses tend to obtain greater heights than on upland sites. They make up about 75 percent of the potential vegetation. In its development, the vegetation on this site was influenced by fires and grazing. The grazing was predominately by large transient herds of bison and lesser numbers of deer and elk.

b. Guidelines for Determining Range Condition:

(Percentage of total production by weight)

<u>Grasses and Grasslike - 90 Percent</u>			<u>Forbs - 10 Percent</u>	<u>Shrubs and Trees - T</u>		
80	35	big bluestem	10	T	buckbrush	
	5	eastern gamagrass			American licorice	common buttonbush
	15	indiangrass			cup rosinweed	common hackberry
	5	little bluestem			Illinois bundleflower	cottonwood
	25	prairie cordgrass			maximilian sunflower	green ash
	5	sideoats grama			Missouri goldenrod	indigobush amorph
	15	switchgrass				
10		Canada wildrye				
		green muhly				
		meadow tall dropseed T				
		scouringrush				
		sedges				
		tall dropseed				
T		Virginia wildrye				
		western wheatgrass				
		blue grama				
		buffalograss				

Invaders common to this site are barnyardgrass, giant foxtail, Japanese brome, little barley, osageorange, silver bluestem, and sumpweed.

6. Management Implications:

This site appears on broad, flat flood plains where sediments have collected to form deep soils. This site is found primarily along the major drainageways. Most of this site is utilized for cropland except where excess moisture prevents cultivation.

Grazing management that includes proper grazing use and periodic rest periods is needed to maintain the climax vegetation on this site. Continuous season long or yearlong grazing results in eastern gamagrass, maximilian sunflower, cup rosinweed, and wholeleaf rosinweed being reduced and eliminated from the site.

Overuse will result in reduction of big bluestem, indiangrass, switchgrass, prairie cordgrass, and American licorice. Principal increasers are tall dropseed, meadow dropseed, buffalograss, western wheatgrass, and baldwin ironweed.

Continued heavy use causes tall dropseed, buffalograss, baldwin ironweed, Japanese brome, little barley, giant ragweed, and western ragweed to become the dominant vegetation.

Proper stocking and timely deferments are the keys to restoring and maintaining the potential vegetation on this site. Other tools such as prescribed burning, selective brush management, and distributional aids will be needed, depending on the management objectives.

#### 7. Wildlife Considerations:

This site is a preferred site of white-tail deer, raccoon, opossum, skunk, and songbirds because of the vegetative diversity and water which is usually closely associated with this site. Management that maintains this diversity is advantageous to most wildlife species.

Numerous birds utilize this site, especially when it is located in conjunction with brush and riparian habitat.

Grazing management that maintains a vigorous plant community will provide quality wildlife food and cover. Maintenance and management of any existing woody species will enhance wildlife diversity and increase the potential population of some species, especially songbirds, raccoons, and opossums.

#### 8. Other Uses and Values:

The use of this site for cropland has greatly reduced the amount remaining in rangeland. The extremes of wetness and dryness on this site and the abundance of vegetation produced prevent this site from being preferred for recreation and related activities.

Although the site is often used for commercial and housing developments, it is not normally recommended. Flooding and high clay soils limit its value for these uses.

#### 9. Herbage Production Guidelines:

The following guidelines are based on available clipping data when this site is in excellent condition. Vigor of principal forage species, proper burning techniques, if used, as well as growing conditions, influence annual herbage production.

<u>Growing Conditions</u>	<u>Total Air Dry Herbage</u>	
	<u>Pounds/Acre</u>	<u>Kilograms/Hectare</u>
Favorable	5,500-7,500	6,160-8,400
Normal	4,500-5,500	5,040-6,160
Unfavorable	3,000-4,500	3,360-5,040



10. Guide to Initial Stocking Rates:

<u>Range Condition</u>	<u>Percent Climax Vegetation</u>	<u>Acres/AU Yearlong</u>	<u>AU Months Per Acre</u>	<u>Hectares/AU Yearlong</u>	<u>AUM's per Hectare</u>
Excellent	76-100	9-11	1.2	3.5-4.5	3.0
Good	51-75	11-15	.9	4.5-6	2.2
Fair	26-50	15-25	.6	6-10	1.5
Poor	0-25	25+	.4	10+	1.0

These guidelines are considered safe initial stocking rates from which a sound management program can be built. Grazing only during the dormant season or use of a specialized grazing program will usually allow a substantial increase in the stocking rates shown.

When maintained in good to excellent condition, an average hay yield of 1.25 to 1.5 tons per acre can be expected from this site.

**11. Relative Preference of Plant Species:**

Preferences of plant species by classes of livestock and uses by wildlife will vary from year to year and season to season. The table below is what might be expected under average climatic conditions and good management.

**Forage Preferences**

H = High  
M = Medium  
L = Low

**Wildlife Preferred Uses**

C = Cover  
F = Food  
N = Nesting

Plant Species	Animal Species		
	Cattle	Deer	Pheasant
American licorice	H	F	F
baldwin ironweed	L	---	---
big bluestem	H	C	C,N
buckbrush	L	C,F	C
cup rosinweed	H	F	F
eastern gamagrass	H	C,F	C,F,N
Illinois bundleflower	H	F	C,F
indiangrass	H	C	C,N
indigobush amorph	L	---	C
Japanese brome	M <u>1/</u>	F <u>1/</u>	F
maximilian sunflower	H	F	C,F
meadow tall dropseed	L	---	C,N
prairie cordgrass	M <u>1/</u>	C	C,N
sideoats grama	H	---	---
switchgrass	H <u>2/</u>	F	C,F,N
western ragweed	M	---	F
western wheatgrass	H	F <u>1/</u>	C,N
wholeleaf rosinweed	H	F	F

1/ Has a high preference during lush growth periods.

2/ Preferred during first half of growing season

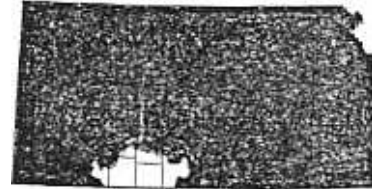
**Reference:**

Anderson, Kling L. and Clenton E. Owensby. 1969 Common Names of a Selected List of Plants. Kansas State University Tech. Bul. 117.

CLAY LOWLAND  
KANSAS RANGE SITE DESCRIPTION

1. Location of Site:

Land Resource Area 78  
Central Rolling Red Plains



2. Climate:

See climate for LRA 78  
(Filed in the front of Section II-E)

3. Topography:

This site occurs on nearly level or gently sloping alluvial lands that receive additional water from flooding.

4. Soils and Hydrological Characteristics:

- a. The deep soils on this site have clayey surfaces and clayey subsoils. Water tables may temporarily rise into the root zone during wet periods but are not the dominant factor controlling vegetative growth. Available water capacity is moderate or high.
- b. The major soil that characterizes this site is Mangum clay
- c. Soils on this site are susceptible to wind and water erosion when unprotected. Internal drainage is slow or very slow with surface ponding a problem. Flooding is also a hazard.

5. Climax Vegetation:

- a. Tall, mid, and short grasses combine to make this a potential mixed grass prairie site. Big bluestem, sideoats grama, switchgrass, and western wheatgrass make up 60 to 65 percent of the potential vegetation. Buffalograss and blue grama combine with sedges to make up an additional 20 percent of the potential vegetation.

b. Guidelines for Determining Range Condition:

(Percentage of total production by weight)

Grasses and  
Grasslike - 90 PercentForbs - 10 PercentCacti - T

65	20	big bluestem	10	burrageweed	pricklypear
	5	indiangrass		curled dock	
	5	little bluestem		Dakota verbena	
	20	sideoats grama		fog fruit	
	25	switchgrass		heath aster	
20	5	vinemesquite	10	lamb'squarter	
	15	western wheatgrass		Louisiana sagewort	
	15	blue grama		nineanther dalea	
	5	buffalograss		Texas croton	
	10	sedges		western ragweed	
5		Canada wildrye			
		meadow dropseed			
		prairie cordgrass			
		sand dropseed			
		tall dropseed			
		white tridens			

c. Invaders common to this site are bottlebrush squirreltail, cocklebur, giant ragweed, Japanese brome, kochia, smartweeds, rag sumpweed, and snow-on-the-mountain.

6. Management Implications:

The high clay content of the soils contributes to a high degree of difficulty in managing this site to maintain it in good to excellent condition.

Although the site is often wet in the spring, it usually becomes extremely dry with large soil cracks in the hot, dry part of the summer. Continuous grazing may cause severe compaction in the spring and early summer months further reducing water intake and root development. This combined with heavy grazing throughout the growing season makes it very difficult to maintain the taller grasses.

With overgrazing blue grama, buffalograss, western wheatgrass, and sand dropseed tend to dominate this site. Continued overgrazing allows the ragweeds, rag sumpweed, little barley, and kochia to dominate the site. Once these plants dominate the site, most of the taller grasses have been eliminated. To return it to its productive potential is very slow even with good grazing management.

Proper stocking rates and flexible grazing systems are necessary to maintain this site or return it to near its potential.

Grazing should be avoided when the site is wet, if practical. It should also allow for grazing and rest periods during the growing season. The grass stubble should be maintained at a sufficient height (6" to 8") to insulate the soil against baking during hot, dry summers. Use of this site for some winter grazing may be advisable because of potential livestock insect problems in the summer and the need to maintain a good vegetative cover during the hot, dry season.

Producers should be cautioned that the forage on this site tends to be somewhat coarser than that on upland sites. The forage may be of lower quality than that found on upland sites, especially during the dormant season.

#### 7 Wildlife Considerations:

When maintained in good to excellent condition, this site provides good feeding and loafing areas for most wildlife native to the area. The wetness in the spring and the dry summer periods limits its value as a yearlong habitat. When in fair to poor condition, this site is of limited value to most wildlife.

#### 8. Other Uses and Values:

Most of this site is used exclusively for rangeland. Limited acreages are used as cropland, both dryland and irrigated. It is not a preferred building site because of flooding and the heavy clay soils.

#### 9 Herbage Production Guidelines:

The following guidelines are based on available clipping data when this site is in excellent condition. Vigor of principal forage species, time of burning, if fire is used, as well as growing conditions, influence annual herbage production.

<u>Growing Conditions</u>	<u>Total Air Dry Herbage</u>	
	<u>Pounds/Acre</u>	<u>Kilograms/Hectare</u>
Favorable	4,500-6,000	5,040-6,720
Normal	3,500-4,500	3,920-5,040
Unfavorable	2,000-3,500	2,240-3,920

Guide to Initial Stocking Rates:

Range Condition	Percent Climax Vegetation	Acres/AU Yearlong	AU Months Per Acre	Hectares/AU Yearlong	AUM's per Hectare
Excellent	76-100	10-12	1.1	4-5	2.7
Good	51-75	12-18	.8	5-7	2.0
Fair	26-50	18-25	.6	7-10	1.5
Poor	0-25	25+	.4	10+	1.0

These guidelines are considered safe initial stocking rates from which a sound management program can be built. Grazing only during the dormant season or use of a specialized grazing program will usually allow a substantial increase in the stocking rates shown.

When in good to excellent condition, this site normally produces about 1.0 ton of native hay per acre.

Relative Preference of Plant Species:

Preferences of plant species by classes of livestock and uses by wildlife will vary from year to year and season to season. The table below is what might be expected under average climatic conditions and good management.

Forage Preferences

H = High  
M = Medium  
L = Low

Wildlife Preferred Uses

C = Cover  
F = Food  
N = Nesting

Plant Species	Animal Species		
	Cattle	Deer	Pheasant
big bluestem	H	C	C,N
blue grama	H	---	---
buffalograss	H	---	---
burrageed	L	F	F
Canada wildrye	H	C,F	C,N
curled dock	L	---	F
heath aster	H	F	F
lambquarter	L	F	F
little bluestem	H	C	C,N
Louisiana sagewort	L	---	F
prairie cordgrass	M <u>1/</u>	C	C,N
sedges	M	F	F
sideoats grama	H	---	C,N
switchgrass	H <u>2/</u>	C	C,F,N
Texas croton	L	---	F
vinemesquite	H <u>2/</u>	C	C,N
western ragweed	M	F	F
western wheatgrass	H	F	C,N

1/ Has a high preference during lush growth periods.

2/ Preferred during first half of growing season.

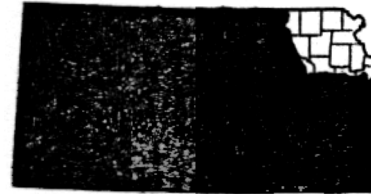
Reference:

Anderson, Kling L. and Clenton E. Owensby. 1969 Common Names of a Selected List of Plants. Kansas State University Tech. Bul. 117.

CLAY LOWLAND  
KANSAS RANGE SITE DESCRIPTION

1 Location of Site:

Land Resource Areas 106 and 107  
Nebraska and Kansas Loess-Drift Hills  
and Iowa and Missouri Deep Loess Hills



2. Climate:

See climate for LRA's 106 and 107  
(Filed in the front of Section II-E)

3. Topography:

Nearly level to concave landscapes located on flood plains.

4. Soils and Hydrological Characteristics:

a. The soils in this site are deep and clayey and have slow to very slow permeability. Their high shrink-swell characteristic causes large deep cracks to develop in dry years. These conditions result in a network of small depressions and ridges scattered across the landscape.

b. The soils that characterize this site are:

Albaton

Onawa

Wabash

c. The soils on this site are occasionally or frequently flooded. Surface runoff is slow and ponding is a hazard during wet seasons. Puddling can be a problem under these conditions. A seasonal, high water table is at a depth of 0 to 3 feet on these poorly or somewhat poorly drained soils.

5 Climax Vegetation:

a. Prairie cordgrass dominates this site when in climax condition. Switchgrass, big bluestem, indiangrass, and eastern gamagrass are also present in smaller quantities. These tall grasses tend to obtain greater heights than on upland sites. They make up about 75 percent of the potential vegetation. In its development, the vegetation on this site was influenced by fires and grazing. The grazing was predominately by large transient herds of bison and lesser numbers of elk and deer.



**b. Guidelines For Determining Range Condition:**

(Percentage of total production by weight)

<u>Grasses and Grasslike - 85 Percent</u>			<u>Forbs - 10 Percent</u>	<u>Shrubs and Trees - 5 Percent</u>
55	50	prairie cordgrass	American licorice	American elderberry
	20	switchgrass	cup rosinweed	black willow
20	20	big bluestem	Illinois bundleflower	buckbrush
	10	eastern gamagrass	maximilian sunflower	common buttonbush
	10	indiangrass	sawtooth sunflower	cottonwood
			tall goldenrod	green ash
10			wholeleaf rosinweed	indigobush amorphia
		Canada wildrye		pin oak
		green muhly	baldwin ironweed	sycamore
		meadow tall dropseed	dogbane	
		rice cutgrass	Pennsylvania smartweed	
		scouringrush	swamp smartweed	
		sedges	wingstem	
		tall dropseed		
		Virginia wildrye		

c. Common invaders to this site include barnyardgrass, giant foxtail, Japanese brome, lanceleaf ragweed, mulberry, osageorange, silver bluestem, and sumpweed.

## 6. Management Implications:

This site appears on broad, flat flood plains where sediments have collected to form deep soils. It is found primarily along the major drainageways. Most of this site is utilized for cropland except where excess moisture prevents cultivation.

To maintain climax vegetation with grazing by cattle, specialized grazing systems that provide periodic rest periods to the vegetation are essential. Continuous season long or yearlong grazing will result in eastern gamagrass, rice cutgrass, maximilian sunflower, sawtooth sunflower, cup rosinweed, and wholeleaf rosinweed being reduced and eliminated from the site.

Overuse will result in reduction of big bluestem, indiangrass, switchgrass, and prairie cordgrass. Principal increasers are tall dropseed, meadow tall dropseed, baldwin ironweed, and buckbrush.

Continued heavy use causes tall dropseed, baldwin ironweed, buckbrush swamp smartweed, Japanese brome, giant ragweed, western ragweed, and Kentucky bluegrass to become the dominant understory vegetation. Osageorange, green ash, pin oak, cottonwood, willow, and sycamore will form the overstory vegetation.

Even with good grazing management the woody overstory vegetation tends to dominate in the absence of fire or other methods of woody vegetation control. The proper use of fire will also aid in the distribution of grazing on this site.

Excessive grazing with sheep will result in tall dropseed, sumpweed, and barnyardgrass becoming the dominant vegetation. Only larger trees already present on the site will persist. Most tree seedlings will be grazed by the sheep.

Proper stocking and timely deferments are the keys to maintaining or restoring the potential vegetation on this site. Other tools such as prescribed burning, selective brush management, and distributional aids will be needed.

#### 7. Wildlife Considerations:

This site is a preferred site for white-tail deer, raccoon, and opossum because of the vegetative diversity and water which is usually closely associated with this site. Numerous species of birds also utilize this site when it is located in conjunction with riparian habitat. Management that maintains this diversity is advantageous to most wildlife species associated with the site.

Good grazing management and/or the use of prescribed burning is necessary to prevent much of this site from having an excessive mulch layer and/or a dense brush understory. Such a condition would make the site less desirable for most wildlife species.

Maintenance and management of existing woodland will enhance species diversity and population numbers.

#### 8. Other Uses and Values:

Only small amounts of this site have been kept in rangeland. The wetness of the site and the abundance of vegetation produced normally prevent this site from being preferred for recreation and related activities.

The management and production of quality hardwood trees on this site can be profitable. Through management this site is capable of good grass production and limited tree production on the same acreage.

9. Herbage Production Guidelines:

The following guidelines are based on available clipping data when this site is in excellent condition. Vigor of principal forage species, time of burning, if fire is used, as well as growing conditions, influence annual herbage production.

<u>Growing Conditions</u>	<u>Pounds/Acre</u>	<u>Total Air Dry Herbage</u>
		<u>Kilograms/Hectare</u>
Favorable	7,500-9,000	8,400-9,800
Normal	6,500-7,500	7,000-8,400
Unfavorable	5,000-6,500	5,400-7,000

10. Guide to Initial Stocking Rates:

<u>Range Condition</u>	<u>Percent Climax Vegetation</u>	<u>Acres/AU Yearlong</u>	<u>AU Months Per Acre</u>	<u>Hectares/AU Yearlong</u>	<u>AUM's per Hectare</u>
Excellent	76-100	5-7	2.0	2-3	5
Good	51-75	8-10	1.5	3-4	3.7
Fair	26-50	11-16	1.0	4-7	2.5
Poor	0-25	16+	.6	7+	1.5

These guidelines are considered safe initial stocking rates from which a sound management program can be built. Grazing only during the dormant season or use of a specialized grazing program will usually allow a substantial increase in the stocking rates shown.

When maintained in good to excellent condition, an average hay yield of 1.75 to 2.25 tons per acre can be expected from this site.

11. Relative Preference of Plant Species:

Preferences of plant species by classes of livestock and uses by wildlife will vary from year to year and season to season. The table below is what might be expected under average climatic conditions and good management.

Forage Preferences

H = High  
M = Medium  
L = Low

Wildlife Preferred Uses

C = Cover  
F = Food  
N = Nesting

Plant Species	Animal Species			
	Cattle	Sheep	Deer	Quail
American licorice	H	H	F	F
baldwin ironweed	L	M/L	---	C
big bluestem	H	M	C	C,N
buckbrush	L	M	F,C	C,F
cup rosinweed	H	H	F	F
eastern gamagrass	H	H	F,C	C,N
Illinois bundleflower	H	H	F	F
indiangrass	H	M	C	C,N
indigobush amorphia	L	L	---	C
Japanese brome	H/L <u>1/</u>	H/L <u>1/</u>	F <u>1/</u>	C
lanceleaf ragweed	L	L	---	C,F
maximilian sunflower	H	H	F	C,F
meadow tall dropseed	L	L	---	C
pin oak	L	M	F,C	C,F
prairie cordgrass	M	L	C	C,N
switchgrass	H/M <u>2/</u>	M	C	C,F,N
tall dropseed	M	L	---	C,N
wholeleaf rosinweed	H	H	F	F

1/ Has a high preference during lush growth periods

2/ Preferred during first half of growing season

Reference:

Anderson, Kling L. and Clenton E. Owensby. 1969 Common Names of a Selected List of Plants. Kansas State University Tech. Bul. 117.